

LISTING OF THE CLAIMS

Claim 1 (currently amended): An etching method comprising:

an etching gas supply step of supplying an etching gas through a gas supply system into a plasma producing chamber;

a plasma producing step of producing radicals in the plasma producing chamber by converting the etching gas into a plasma by applying radio frequency power to the etching gas; and

an etching step of etching an object to be processed in a reaction chamber, which is connected to the plasma producing chamber and is evacuated, by the radicals flowing from the plasma producing chamber into the reaction chamber;

wherein the etching gas is supplied through the gas supply system at an etching gas supply rate of 8.4 sccm or above for a substantial volume of one liter of the reaction chamber,

a flow of etchant is provided at a flow rate which produces a flow diverging position with respect to an outer periphery of an object being etched that is substantially at or internal to the outer periphery of the object being etched, and

the process pressure is about 5 to about 10 mTorr.

Claim 2 (original): The etching method according to claim 1, wherein the plasma producing step converts the etching gas into a plasma by inductive coupling using an induction coil.

Claim 3 (original): The etching method according to claim 1, wherein the etching step uses chlorine gas as the etching gas and etches a polysilicon film formed on the object to be processed.

Claim 4 (original): The etching method according to claim 1, wherein the etching gas supply rate is 8.4 sccm to 16.9 sccm for a substantial volume of one liter of the reaction chamber.

Claim 5 (original): The etching method according to claim 2, wherein the etching gas supply rate is 8.4 sccm to 16.9 sccm for a substantial volume of one liter of the reaction chamber.

Claim 6 (original): The etching method according to claim 3, wherein the etching gas supply rate is 8.4 sccm to 16.9 sccm for a substantial volume of one liter of the reaction chamber.

Claim 7 (cancelled)

Claim 8 (currently amended): An ~~The~~ etching method according to claim 2, comprising:

an etching gas supply step of supplying an etching gas through a gas supply system into a plasma producing chamber;

a plasma producing step of producing radicals in the plasma producing chamber by converting the etching gas into a plasma by applying radio frequency power to the etching gas;
and

an etching step of etching an object to be processed in a reaction chamber, which is connected to the plasma producing chamber and is evacuated, by the radicals flowing from the plasma producing chamber into the reaction chamber;

wherein the etching gas is supplied through the gas supply system at an etching gas supply rate of 8.4 sccm or above for a substantial volume of one liter of the reaction chamber,

the plasma producing step converts the etching gas into a plasma by inductive coupling using an induction coil, and

a flow of etchant is provided at a flow rate which produces a flow diverging position with respect to an outer periphery of an object being etched that is substantially at or internal to the outer periphery of the object being etched.

Claim 9 (previously amended): The etching method according to claim 3, wherein a flow of etchant is provided at a flow rate which produces a flow diverging position that is internal to an outer periphery of an object being etched.

Claim 10 (previously amended): The etching method according to claim 4, wherein a flow of etchant is provided at a flow rate which produces a flow diverging position that is internal to an outer periphery of an object being etched.

Claim 11 (cancelled)

Claim 12 (currently amended): The etching method according to claim ~~4~~ 1 wherein the process pressure is 5 mTorr.

Claims 13 and 14 (cancelled)

Claim 15 (new): The etching method according to claim 8, wherein the etching step uses chlorine gas as the etching gas and etches a polysilicon film formed on the object to be processed.

Claim 16 (new): The etching method according to claim 8, wherein the etching gas supply rate is 8.4 sccm to 16.9 sccm for a substantial volume of one liter of the reaction chamber.

Claim 17 (new): The etching method according to claim 15, wherein the etching gas supply rate is 8.4 sccm to 16.9 sccm for a substantial volume of one liter of the reaction chamber.

Claim 18 (new): The etching method according to claim 15, wherein a flow of etchant is provided at a flow rate which produces a flow diverging position that is internal to an outer periphery of an object being etched.

Claim 19 (new): The etching method according to claim 16, wherein a flow of etchant is provided at a flow rate which produces a flow diverging position that is internal to an outer periphery of an object being etched.

Claim 20 (new): The etching method according to claim 8 wherein the process pressure is about 5 to about 10 mTorr.

Claim 21 (new): The etching method according to claim 20 wherein the process pressure is 5 mTorr.

Claim 22 (new): The etching method according to claim 15 wherein the process pressure is about 5 to about 10 mTorr.